UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/698,881	10/27/2000	Esa Torma	796.372USW1	8858

32294 7590 12/16/2004	EXAMINER
SQUIRE, SANDERS & DEMPSEY L.L.P. 14TH FLOOR 8000 TOWERS CRESCENT TYSONS CORNER, VA 22182	NGUYEN, STEVEN H D

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/698,881	TORMA ET AL.
	Examiner	**Art Unit**	
	Steven HD Nguyen	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _23 July 2004_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _8-18_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _8-18_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _7/23/0 4_

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Response to Amendment

1.   This action is in response to the amendment filed on 7/23/04. Claims 1-7 have been

canceled and claims 8-18 are pending in the application.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claims 8-9, 11-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Varghese (USP 5313467) in view of the admitted prior art.

Regarding claims 8, 13 and 14, Varghese discloses a network element for a

telecommunications networks comprising a first interface unit for receiving standard PCM

signals in the network elements (Fig 1, Ref 12 has a interface for receiving a standard PCM

signals); multiplexing means for (Fig 1, Ref 12 for multiplexing the PCM signals from a first

source and packet stream signals from a second source into a payload of a frame wherein the

payload is corresponding the PCM signals from the first source) multiplexing said PCM signals

on a time-division basis into a transmission frames the total capacity of a payload portion of the

frame essentially corresponding to the capacity of N PCM signals. wherein the multiplexing

means are provided with configuring and allocating means for dividing the total capacity of the

payload portion between at least two parts of variable capacity. wherein each part is configured

to be allocated a desired portion of the total capacity of the payload portion in accordance with

the current transmission requirement and for allocating a part with the desired capacity to at least

one traffic source from a group in which a number of PCM signals constitutes a first traffic

source and a number of packet data streams constitutes a second traffic source (See col. 2, lines

59 to col. 3, lines 34 and col. 6, lines 9-54, a multiplexer is configured for dividing the payload

into two parts having a variable capacity based on the current transmission required of the PCM

signals wherein a part is used to carry PCM signals and the other part is used to carry packet data

stream; See Fig 4) and a second interface for receiving the packet data stream from the second

traffic source and directly input into the multiplexing means according the allocation portion of

the second traffic source on the output frame (Fig 7a, Ref 40). However, Varghese fails to

disclose a second interface unit , for receiving a packet data stream, said second interface unit

comprising rate adaptation means for adapting the bit rate of the packet data stream to

correspond to the capacity of the payload portion allocated to the packet stream to correspond to

the capacity of the payload portion allocated to the packet stream, the output of said rate

adaptation means being directly connected to said multiplexing means. In the same field of

endeavor, the admitted prior art discloses a second interface unit , for receiving a packet data

stream, said second interface unit comprising rate adaptation means for adapting the bit rate of

the packet data stream to correspond to the capacity of the payload portion allocated to the

packet stream to correspond to the capacity of the payload portion allocated to the packet stream,

the output of said rate adaptation means being directly connected to said multiplexing means (Fig

3 discloses a rate adaptation for receiving the packet data stream and direct input them into the

multiplexer).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention was made to apply an rate adaptation with ATM interface as disclosed by the admitted

prior art into the system of Varghese. The motivation would have been to map the transmitting

rate of the ATM interface with the allocated bandwidth for packet stream on the payload portion

of transmission frame and prevent data loss.

Regarding claims 9 and 15, Varghese discloses a portion of the total capacity of the

transmission frame corresponding to the capacity required by one PCM signal multiplied by an

integer is allocated to all traffic sources using the same transmission frame (Fig 4 discloses a slot

for carrying a PCM signal such voice is multiplied with the number of allocated all the traffic

source).

Regarding claims 11 and 16, Varghese discloses bits of each part are interleaved in the

payload portion, and that of the bits of the payload portion, it is indicated bit-specifically whether

they are allocated for the use of PCM signals or a packet data stream (Fig 4, the PCM and packet

stream is multiplexed into the frame based on allocated masked that indicates where the PCM

and PACKET stream must be multiplexed into the frame; See col. 14, lines 36-58 and Ref 62 of

Fig 7a).

Regarding claims 12 and 18, Varghese discloses the capacity of the payload portion is

entirely allocated for the use of one packet data stream (Fig 4, it is inherently disclosed the

capacity of payload portion being allocated to one packet data stream if not PCM signal is

transmitting).

4.   Claims 8-9, 11-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Calvignac (USP 4761781) in view of the admitted prior art.

Regarding claims 8, 13 and 14, Calvignac discloses a network element for a

telecommunications networks comprising a first interface unit for receiving standard PCM

signals in the network elements (Fig 10, Ref N circuits); multiplexing means for (Fig 10,

Medium access) multiplexing said PCM signals on a time-division basis into a transmission

frames the total capacity of a payload portion of the frame essentially corresponding to the

capacity of N PCM signals (Fig 10, complex frame has a capacity which corresponds to N PCM

signals from the circuit); wherein the multiplexing means are provided with configuring and

allocating means for dividing the total capacity of the payload portion between at least two parts

of variable capacity. wherein each part is configured to be allocated a desired portion of the total

capacity of the payload portion in accordance with the current transmission requirement and for

allocating a part with the desired capacity to at least one traffic source from a group in which a

number of PCM signals constitutes a first traffic source and a number of packet data streams

constitutes a second traffic source (Col. 2, lines 7-39 discloses a means for dividing the payload

of the complex frame into two variable parts wherein each part is corresponding the required

current transmission of the first source and the other part corresponds to packet stream from the

second source) and a second interface for receiving the packet data stream from the second

traffic source and directly input into the multiplexing means according the allocation portion of

the second traffic source on the output frame (Fig 10, Ref 414 for receiving a packet stream, See

col. 3, lines 37 to col. 4, lines 26, each portion carries a type of traffic such PCM or packet).

However, Calvignac fails to disclose a second interface unit , for receiving a packet data stream,

said second interface unit comprising rate adaptation means for adapting the bit rate of the packet

data stream to correspond to the capacity of the payload portion allocated to the packet stream to

correspond to the capacity of the payload portion allocated to the packet stream, the output of

said rate adaptation means being directly connected to said multiplexing means. In the same

field of endeavor, the admitted prior art discloses a second interface unit , for receiving a packet

data stream, said second interface unit comprising rate adaptation means for adapting the bit rate

of the packet data stream to correspond to the capacity of the payload portion allocated to the

packet stream to correspond to the capacity of the payload portion allocated to the packet stream,

the output of said rate adaptation means being directly connected to said multiplexing means (Fig

3 discloses a rate adaptation for receiving the packet data stream and direct input them into the

multiplexer).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention was made to apply an rate adaptation with ATM interface as disclosed by the admitted

prior art into the system of Calvagniac. The motivation would have been to map the transmitting

rate of the ATM interface with the allocated bandwidth for packet stream on the payload portion

of transmission frame and prevent data loss.

Regarding claims 9 and 15, Calvignac discloses a portion of the total capacity of the

transmission frame corresponding to the capacity required by one PCM signal multiplied by an

integer is allocated to all traffic sources using the same transmission frame (See col. 4, lines 13-

25, the capacity required by one PCM signals is multiplied by an number is allocated to all traffic

sources using the same frame in order to allocate the bandwidth for PCM signal, one PCM signal

is 8 bit and equal one slot).

Regarding claims 11 and 16, Calvignac discloses bits of each part are interleaved in the

payload portion, and that of the bits of the payload portion, it is indicated bit-specifically whether

they are allocated for the use of PCM signals or a packet data stream (a slot table for indicating

which slot in the frame is assigned for multiplexing circuit or packet bits; see col. 9, lines 30-42).

Regarding claims 12 and 18, Calvignac discloses the capacity of the payload portion is

entirely allocated for the use of one packet data stream (it is inherently disclosed the capacity of

payload portion being allocated to one packet data stream if not PCM signal is transmitting).

5.   Claims 8-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chopping

(USP 5313467) in view of the admitted prior art.

Regarding claims 8, 13 and 14, Chopping discloses a network element for a

telecommunications networks comprising a first interface unit for receiving standard PCM

signals in the network elements (Fig 3, Ref 30 CHAN for receiving PCM signals); multiplexing

means for (Fig 3, MUX and Col. 4, lines 39-43 discloses the portion of payload corresponding

the PCM signals) multiplexing said PCM signals on a time-division basis into a transmission

frames the total capacity of a payload portion of the frame essentially corresponding to the

capacity of N PCM signals. wherein the multiplexing means are provided with configuring and

allocating means for dividing the total capacity of the payload portion between at least two parts

of variable capacity. wherein each part is configured to be allocated a desired portion of the total

capacity of the payload portion in accordance with the current transmission requirement and for

allocating a part with the desired capacity to at least one traffic source from a group in which a

number of PCM signals constitutes a first traffic source and a number of packet data streams

constitutes a second traffic source and a second interface (Fig 1b discloses an interface for

receiving ATM cell) for receiving the packet data stream from the second traffic source and

directly input into the multiplexing means according the allocation portion of the second traffic

·source on the output frame (Col. 4, lines 39-43 discloses the capacity of payload of the frame is

divided between the current transmission of PCM signals and other part is allocated for packet

stream and a means for dividing the payload of the complex frame into two variable parts

wherein each part is corresponding the required current transmission of the first source and the

other part corresponds to packet stream from the second source, the portions carry at least one of

traffic source such PCM or packet stream, see col. 2, lines 39-43 wherein the output frame

carries the PCM signal and packet stream signal according the allocated bandwidth). However,

Chopping fails to disclose a second interface unit , for receiving a packet data stream, said

second interface unit comprising rate adaptation means for adapting the bit rate of the packet

data stream to correspond to the capacity of the payload portion allocated to the packet stream to

correspond to the capacity of the payload portion allocated to the packet stream, the output of

said rate adaptation means being directly connected to said multiplexing means. In the same

field of endeavor, the admitted prior art discloses a second interface unit , for receiving a packet

data stream, said second interface unit comprising rate adaptation means for adapting the bit rate

of the packet data stream to correspond to the capacity of the payload portion allocated to the

packet stream to correspond to the capacity of the payload portion allocated to the packet stream,

the output of said rate adaptation means being directly connected to said multiplexing means (Fig

3 discloses a rate adaptation for receiving the packet data stream and direct input them into the

multiplexer).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention was made to apply an rate adaptation with ATM interface as disclosed by the admitted

prior art into the system of Chopping. The motivation would have been to map the transmitting

rate of the ATM interface with the allocated bandwidth for packet stream on the payload portion

of transmission frame and prevent data loss.

Regarding claims 9 and 15, Chopping discloses a portion of the total capacity of the

transmission frame corresponding to the capacity required by one PCM signal multiplied by an

integer is allocated to all traffic sources using the same transmission frame (col. 3, lines 39-43

the capacity required by one PCM signals is multiplied by an number is allocated to all traffic

sources using the same frame in order to allocate the bandwidth for PCM signal, one PCM signal

is 8 bit and equal one slot).

Regarding claims 10 and 17, Chopping discloses at least one traffic source is ATM traffic

(Fig 3, ATM).

Regarding claims 11 and 16, Chopping discloses bits of each part are interleaved in the

payload portion, and that of the bits of the payload portion, it is indicated bit-specifically whether

they are allocated for the use of PCM signals or a packet data stream (col. 3, lines 20-25).

Regarding claims 12 and 18, Chopping discloses the capacity of the payload portion is

entirely allocated for the use of one packet data stream (it is inherently disclosed the capacity of

payload portion being allocated to one packet data stream if not PCM signal is transmitting).

6.   Claims 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Varghese/Calvignac and admitted prior art as applied to claims 8 and 14 above, and further in

view of Chopping (USP 5793760).

Varghese/Calvignac and The admitted prior art disclose fails to disclose at least one of

the traffic sources is constituted by an ATM cell stream. In the same field of endeavor,

Chopping discloses a method and system for multiplexing a plurality of signals into a frame

wherein at least one is an ATM cell stream (Fig 1a).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention was made to apply an ATM traffic source into a multiplexer for multiplexing PCM and

ATM signals into a frame as disclosed by Chopping's system into the system of

Varghese/Calvignac and the admitted prior art. The motivation would have been to provide a

method for transmitting ATM and PCM signal without transform 64 Kbits into ATM or ATM to

64 kbits and prevent data loss.

Response to Arguments

7.   Applicant's arguments filed 7/23/04 have been fully considered but they are not

persuasive.

In response to pages 10-12, the applicant states that the prior arts fails to disclose a

system without (1) an inverse multiplexing, (2) the signal carried in the prior art is a single bit

flow not a number N of PCM signals which is multiplexed into the allocated portion of payload

of the output frame and (3) the packet stream is directly input into the output frame via a

multiplexer.

In response to applicant's argument (1) that the references fail to show certain features of

applicant's invention, it is noted that the features upon which applicant relies (i.e., without an

inverse multiplexer) are not recited in the rejected claim(s). Although the claims are interpreted

in light of the specification, limitations from the specification are not read into the claims. See *In*

re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to (2), Varghese discloses a multiplexer (Fig 2, Ref 12 for receiving a

plurality of PCM signals from the PBX 24A) for multiplexing a plurality of PCM signals into an

allocated portion of the output frame of the output link (Fig 2, Ref 16), each PCM signal is

multiplexed into each time slot of the output frame (See Fig 3-4). Calvignac discloses (Fig 10) a

multiplexer (Medium Access) for receiving a plurality of PCM signals and multiplexing a

plurality of received PCM signals into an allocated portion of the output frame of the output link

(Complex frame, Fig 2b) wherein each PCM signal is multiplexed into each time slot of the

output frame. Chopping discloses a multiplexing for receiving a plurality of PCM signals and

multiplexing them into the allocated portion of the output frame (Fig 2 and 3).

In response to (3), Varghese discloses a second interface for receiving a packet stream for

multiplexing them directly into the output frame according the allocated of the output frame for

the packet stream interface (Fig 7a, Ref 40). Calvignac discloses an packet interface (Fig 10, Ref

414) for receiving a packet stream and directly input into the multiplexer (Medium access)

according the allocated of the output frame for the packet stream interface and Chopping

discloses an ATM interface for receiving a packet stream and directly input into the multiplexer

according the allocated of the output frame for the packet stream interface (Fig 3). However, the

prior arts do not the second interface comprising a packet adaptation for adapting the bit rate of

the packet stream. In the same field of endeavor, the admitted prior art disclose a rate adaptation

for adapting the bit rate of the packet stream before input into the multiplexing. The motivation

would have been to prevent data loss.

Conclusion

8.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Steven HD Nguyen whose telephone number is (571) 272-3159.

The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy D Vu can be reached on (571) 272-3155. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven HD Nguyen
Primary Examiner
Art Unit 2665
12/5/04